Henry Harap

# CURRICULUM JOURNAL

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SOCIETY FOR CURRICULUM STUDY

Bureau of Educational Research
College of Education
The Ohio State University, Columbus, Ohio

# SOCIETY FOR CURRICULUM STUDY

A professional organization including the following workers: curriculum directors in county, city, and state school systems; other administrative and supervisory officers who are primarily interested in curriculum; classroom teachers who are working on special curriculum problems; research workers and authors of curriculum studies; college and university instructors; curriculum workers in non-school organizations; and others who are especially interested in this professional field. Membership upon application to the Executive Secretary. Annual dues $2.00 per year, including the Curriculum Journal. The annual subscription to the Curriculum Journal is $2.50 for institutions and non-members.


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# CURRICULUM JOURNAL


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## NEWS NOTES

General Education Board Extends Grant to BUILDING AMERICA. A renewal of the grant of the General Education Board to BUILDING AMERICA assures the existence of the Society's pictorial magazine of modern problems for at least three years. According to the terms of the grant the Society will receive $15,000 for 1936, $10,000 for 1937, and $5,000 for 1938. A portion of the funds will be used for experimentation with the issues of BUILDING AMERICA as learning material.

New Mexico State Curriculum Program. The General Education Board has made a grant of $18,000 for the improvement of instruction in the State of New Mexico. This grant is to be supplemented by funds of the New Mexico Educational Association. General supervision of the work is vested in an executive committee composed of State Superintendent, H. R. Rodgers, Vernon O. Tolle, executive secretary of the New Mexico Educational Association, and Dr. S. P. Nanniga of the University of New Mexico. Dr. L. S. Tireman of the University will be the director of the program, with Mrs. Marie Hughes as assistant director and Mrs. Mary Watson as field worker. The state has been divided into districts with an assistant director in each district. The program is expected to extend over a three-year period and culminate in a course of study for the elementary schools. The first year will be devoted to a study of methods and procedures in curriculum making. The remaining time will be devoted to setting up laboratory centers in each county for the working out of units of instruction.

The Arizona Program of Curriculum Revision. In connection with the program in revision of the elementary schools of the State of Arizona, ten bulletins have been printed and distributed. The most recent ones deal with health education, physical education, and industrial arts. Bulletins in natural science, Americanization and agriculture are in preparation. Work on the high school curriculum has been in progress for the past two years. Under the general direction of E. W. Montgomery, Superintendent of the Phoenix Union High School several hundred teachers in the Arizona high schools have contributed to this program.

Annual Report of Activities of Members to be Issued as a Supplement. As a result of action taken by the Executive Committee, the annual report of the activities of the members which is ordinarily included in the January or February number of the Journal, will be issued as a separate publication and will be distributed as a supplement exclusively among the members of the Society.

An Experimental Rural Curriculum. Aided by a grant of $5,000 from the Keith Fund of New York, Antioch School of thirty-five pupils in the village of Yellow Springs, Ohio, will develop a curriculum based on the rural environment. The program is organized into a series of "jobs" involving dramatics, nature study, school government and housekeeping. The fundamental skills are tied in with the "jobs", but the children's attainments are checked periodically. There are two school stores conducted by the children and a large, old-fashioned house is the center of a rural housekeeping project.

Change in Leadership of the Mississippi Program. Mr. F. C. Jenkins, formerly the Director of the Mississippi Program of Curriculum Revision, has joined the staff of the Cooperative Study of Secondary School Standards, as Regional Director for the Atlantic States. He will be replaced by Mr. D. R. Patterson, formerly Superintendent of Schools, of Ruleville, Mississippi. Mr. Patterson was trained for the position at the Curriculum Laboratory at Peabody College.

Regional Unit Formed in the Northwest. An Inland Empire Unit of the Society for Curriculum Study has been established revolving around the annual educational conference held at Spokane, Washington, covering the following States: Utah, Idaho, Montana, Oregon and Washington. Edgar M. Draper of the University of Washington, was elected Executive Secretary.

Southern Policy Papers - A New Pamphlet Series. The University of North Carolina Press has issued a series of pamphlets prepared by the Southern Policy Committee, to stimulate interest in questions of public importance in the South. The following pamphlets are available: Southern Population and Social Planning, Social Security for Southern Farmers, Social Legislation in the South, How the Other Half is Housed, Industrial Social Security in the South, The Southern Press Considers the Constitution, and The T V A and Economic Security in the South. The pamphlets are priced at 15 cents.

Teachers' Guide to Child Development in the Intermediate Grades. This volume was prepared under the direction of the California State Curriculum Commission and is a companion volume to Teachers' Guide to Child Development; A Manual for Kindergarten and Primary Teachers. The publication is not a state course of study. Instead, it offers suggestions for the purpose of assisting local school systems to develop their own courses of study. The volume contains chapters indicating the point of view of the State Curriculum Commission and the State Department of Education relative to the general nature of an educational program in the intermediate grades, followed by chapters on the several subject fields. Six examples of curriculum units developed in representative schools are included.

Tentative Report of the Georgia Committee on the Scope of the Curriculum. In connection with the Georgia program for Improvement of Instruction, the Committee on the Scope of the Curriculum has issued a tentative chart showing the experience areas and aspects of living which will form the basis of the developing curriculum. To provide continuity each educational level stresses an "experience area" based upon child development. Within each educational level seven important aspects of living furnish the key to the learning experiences.

A Curriculum Laboratory at Furman University. For the purpose of helping teachers to keep abreast of trends in curriculum construction, the Furman University Summer School of Greenville, S.C. established a Curriculum Laboratory. Special help was provided for those who were interested in working on any big phase of curriculum development, or in planning units of work for their own classroom.

Lyman Bryson elected to Editorial Board of Building America. To fill the vacancy in the Editorial Board of Building America, created by the resignation of Hollis L. Caswell, the Executive Board of BUILDING AMERICA elected Lyman Bryson who will represent the field of adult education.

Curriculum Consultant Appointed in Pennsylvania. The Department of Public Instruction of the State of Pennsylvania announced the appointment of Allan O. Dech to the position of Senior Curriculum Consultant. Mr. Dech was engaged in curriculum study at Teachers College, Columbia University during the summers of 1931-1933. His professional experience consists of teaching research and curriculum study in the Summit Hill High School at Reading, The Pottstown Public Schools, and the Oyster Bay Public Schools. The Department has recently published a new course of study in Journalism for secondary schools and will soon publish a bulletin entitled "Suggestions for Developing Courses of Study in Literature for Secondary Schools." This bulletin is in the form of suggestions for units to be used in grades seven to twelve. Unit topics are types of experiences desired for pupils in English classes.

Shift in Secondary Studies in New York State. Shifting emphasis in the curriculum is seen in the following table, which shows the comparative per cent of secondary (four-year high school) pupils studying various subjects in New York State schools in 1919 and 1934:

| Subject | 1919 | 1934 | Subject | 1919 | 1934 |
|---|---|---|---|---|---|
| English | 84.2 | 91.7 | Bookkeeping | 15.9 | 12.6 |
| Latin | 32.8 | 15.9 | Commercial Arithmetic | 11.5 | 7.0 |
| French | 27.2 | 27.3 | Shorthand | 10.1 | 12.7 |
| German | 5.8 | 6.1 | Typewriting | 14.1 | 20.9 |
| Spanish | 17.4 | 7.9 | Drawing | 43.8 | 34.3 |
| Mathematics | 58.2 | 46.8 | Music | 28.1 | 17.7 |
| Science | 62.5 | 64.8 | Home Economics | 7.8 | 7.6 |
| History | 32.2 | 37.4 | Agriculture | .9 | .8 |
| Civics | 19.6 | 24.3 | Industrial Arts | 5.7 | 6.3 |
| Economics | 1.2 | 5.7 | Technical Courses | * | 1.9 |
| Economic Geography | 2.9 | 7.5 | | | |

*Included with industrial arts.

(From New York Times, May 3, 1936)

Safety Education. Another state which recently began a program of safety education is California. The State Department of Education in cooperation with law enforcement agencies is planning a program of instruction in traffic laws, drivers' responsibilities and other phases of traffic education. The department will issue a bulletin to serve as a guide for teachers in this program.

A New General College. The General College, University of Florida, has been in operation one year. The college offers a two year program consisting of eight or nine comprehensive examinations, certain specialized courses, and a definite system of student guidance designed to provide for the adjustment of the individual student's program to his needs and abilities.

The comprehensive work consists of the following divisions: Man and the Social World, Man and the Biological World, Man and the Physical World, Man and his Thinking, Reading, Writing and Speaking, General Mathematics, and two or three courses from special departments. These comprehensive courses are required of all students.

Completion of the General College Program with permission to enter the upper division of the university is dependent solely upon the student's standing on the comprehensive examinations. Semester hour credits, class marks, and clock hours have no place in the program of promotion. Students who show by comprehensive examinations that they are unfit for upper division work are given a certificate of graduation from the General College and are thus not branded as failures as under the old system. Syllabi of the comprehensive courses have been prepared and may be purchased through the university bookstore.

United States Office of Education to issue List of Courses of Study. It is reported that the United States Office of Education will issue a new list of courses of study in the near future. This publication will include a directory of curriculum laboratories. It is suggested that members of the Society notify the U. S. Office of Education if they maintain a laboratory.

Missouri Revises Elementary Curriculum. From Mr. Arty B. Smith, Director of Research, comes a report that the state of Missouri is undertaking a revision of the elementary courses of study. It appears likely that a certain type of curriculum integration will be attempted. The learning areas in terms of subject matter are as follows: Language Arts, Social Arts, Science Arts, Fine Arts, and Recreation Arts. Each of these fields represent fusion of four or more subjects.

California Studies Scope and Sequence of Curriculum. The California State Department has set up a committee on Scope and Sequence of Major Learnings in the Curriculum. A recent report defines the scope in terms of fourteen major functions. The sequence within the curriculum is presented on the basis of five themes for the successive educational levels from kindergarten through Grade XIV. It is anticipated that a more extended report will be made next year. A tentative report is found in the July, 1936, number of CALIFORNIA SCHOOLS.

The Curriculum Laboratory of Peabody College. The Division of Surveys and Field Studies of George Peabody College has issued a mimeographed descriptive circular concerning its curriculum laboratory. It contains a list of related curriculum courses; a chart showing the organization of the laboratory; and a floor plan. Copies of this circular may be secured by writing to Peabody College.

A Curriculum of Living Experiences. New College, Columbia University, has announced the opening of a new secondary school at Springdale Farms, Canton, North Carolina. It aims to develop boys and girls toward effective maturity through purposeful, constructive, intelligent living in a place where the activities are real, not dramatized. Everybody is concerned with such fundamental problems as how to keep well, how to make a living, how to get along with people, how to enjoy art and beauty, how to adapt to the environment, how to develop a sustaining philosophy or set of values. The program of the Springdale School will be built around the many responsibilities which living in the Springdale School will demand rather than around subjects. The boys and girls of the school will be confronted with maintaining their health; with producing, securing and preparing proper food; with obtaining proper recreation, proper esthetic stimulation; and achieving proper relationships with those with whom they live.

# SUMMER CURRICULUM CONFERENCES

University of Alabama. The Eighth Annual State Education Conference was held in connection with the University of Alabama Summer School, June 22-24. The Conference program was built around a discussion of the curriculum, with Dr. L. Thomas Hopkins, Teachers College, Columbia University, as leader. The Conference held morning, afternoon, and evening sessions. Dr. Hopkins delivered six addresses, each followed by a general discussion. Three panel discussions were held with Dr. Hopkins summarizing. The problems discussed were: How Shall We Conceive the Curriculum? What is the Meaning and Practice of Integration? How is Philosophy Used in Curriculum Development? What Psychology of Learning is Most Helpful? How Can Units be Improved? How Should We Develop Curriculum Programs? The Panel discussions were developed around the following topics: The New Elementary Curriculum, The Emerging Secondary School Curriculum, and the Administrative Problems in Curriculum Development.

University of Arkansas. A three-day conference on curriculum problems pertaining to the state program of curriculum revision was held at the University of Arkansas on July 8 - 10. Addresses, debates, and panel discussions were included in the conference procedure. The themes included The Unit in Curriculum Revision; Outstanding Curriculum Practices; The Core Curriculum for the Secondary Schools; Proposed Pattern for Curriculum Bulletins. Some of the speakers were: Ed McCuistion, director of the Arkansas Curriculum Program; Doak S. Campbell, Director of Field Studies and Surveys, George Peabody College for Teachers; and W. E. Phipps, State Commissioner of Education, Arkansas.

University of California at Los Angeles. The University of California at Los Angeles held a series of conferences on problems of curriculum organization and administration on July 15, 22, and 29. The afternoon sessions were conducted on the seminar plan by members of the staff. The evening sessions pertaining to secondary school problems were held under the auspices of the California Society of Secondary Education.

George Peabody College for Teachers. The theme of the conference for workers on curriculum problems which was sponsored by the Division of Surveys and Field Studies of George Peabody College for Teachers was Public School Curriculum Programs and the Education of Teachers. There were two sessions daily on July 20, 21, and 22. The morning conferences were devoted to the presentation of major problems by guest speakers and discussion leaders. During the afternoon an opportunity was provided to observe the work of the various groups in the curriculum laboratory. The guest speakers included Thomas Alexander of New College, Columbia University;

J. J. Oppenheimer of the University of Louisville; and W. E. Peik of the University of Minnesota. The Curriculum Laboratory included the following groups during the last summer: Alabama State Program, Dr. C. B. Smith, Director; Arkansas State Program, Mr. Ed McCuistion, Director; Kansas State Program, Miss Dale Zeller, Director; Mississippi State Program, Mr. D. R. Patterson, Director; Tennessee State Program, Mr. Frank C. Bass, Director.

University of Illinois. A five-day conference on the curriculum was held at the University of Illinois July 13 to 17, 1936. Charles H. Judd, Russell M. Story, Coleman R. Griffith, H. Gordon Hullfish, Fred C. Ayer, Samuel Everett, Eldridge T. McSwain, B. N. Hanna, Liesette J. McHarry, Marie Anderson, Ralph M. Holmes, C. O. Arndt, C. O. Jackson, Rev. P. C. Potter, William Habberton, Joseph A. Nyberg, Erwin H. Sassman, and Herbert B. Bruner were amont the speakers and group chairmen at the conference. Eight hundred and ninety eight persons attended the conference, representing 21 different states and 430 different schools in the state of Illinois. Russell T. Gregg was the general chairman of the conference.

Illinois State Normal University. In cooperation with the State program of curriculum revision the Illinois State Normal University held a four-day conference from July 20 to July 24, the general theme of which was "The Curriculum in Modern Education." There were two general sessions of the Conference each of the four days. The topic presented in the morning was discussed in the afternoon session with particular emphasis on the situation in the state of Illinois and possible developments in curriculum reconstruction. The speakers included: Charles A. Lee, Washington University, St. Louis; Charles C. Stadtman, Department of Public Instruction in Illinois; Henry Harap, Bureau of Educational Research, Ohio State University; Samuel Everett, College of Education, University of Illinois; John G. Flowers, State Teachers College, Montclair, New Jersey; E. S. Simmonds, Department of Public Instruction in Illinois; Doak S. Campbell, George Peabody College for Teachers, Nashville, Tenn.

Southern Illinois State Normal University. The Southern Illinois State Normal University at Carbondale, Illinois, held a three-day conference, June 17 - 19, 1936, as a part of the State Curriculum Revision Program in Illinois. The speakers in the field of the curriculum were Charles C. Stadtman, 1st Assistant State Superintendent of Public Instruction, President R. G. Buzzard of Eastern State Teachers College at Charleston and Dr. Samuel Everett of the University of Illinois.

Western Illinois State Teachers College. Western Illinois State Teachers College at Macomb, Illinois, held a conference on curriculum problems June 23 - 25. Speakers at the conference included Dr. Charles H. Judd, Chicago University, Dr. Charles A. Lee, Washington University, and Dr. Harl R. Douglass of the University of Minnesota. The sixth session of the conference was given over to a panel discussion of Six Issues in Secondary Education. This conference was also a part of the State Curriculum Revision Program in Illinois.

Northern Illinois State Teachers College. Northern Illinois State Teachers College, at DeKalb, Illinois, held a one-day curriculum conference in July, 1936, which featured the state program as presented by the members of the office of the State Superintendent of Public Instruction. The conference was preceded by discussions on various aspects of the State program both among the faculty and in most of the summer session classes at the college. The staff and the student body were therefore prepared to enter into a series of lively discussions when the program was presented by members of the State Department.

University of Kansas. The University of Kansas on June 24, 1936, held a one-day Conference on School Curriculum Problems. The conference was intended to arouse interest and stimulate thinking in connection with the Kansas State Curriculum Revision Program which has recently been initiated. Dean R. A. Schwegler, of the School of Education, opened the Conference. The two principal speakers were State Superintendent W. T. Markham, and Dr. Samuel Everett, of the University of Illinois, each of whom gave two talks at the conference. Other speakers from Kansas were Superintendent Rees Hughes, Principal J. E. Jacobs, and Superintendent G. A. Swift.

Louisiana Polytechnic Institute. Two weekly conferences were scheduled in connection with the summer session of the Teacher Training School of the Louisiana Polytechnic Institute at Ruston, Louisiana. These conferences revolved around the work of the training school which experimented with new departures in science, social science, mathematics and English. They were addressed by leaders in curriculum making.

Northwestern University. On July 20 - 21, 1936, Northwestern University held a Conference on Survey Courses in Colleges, Universities, Teachers Colleges and Junior Colleges. Speakers at the Conference included, Malcolm Maclean, Director of the General College,

University of Minnesota, B. Lamar Johnson, Dean of Instruction, Stephens Junior College, J. G. Flowers, Director of Integration, New Jersey State Teachers College, Paul W. Paustian, Head of the Department of Social Science, Stephens College, Frederick Hovde, Assistant Director, General College, University of Minnesota, Alvin C. Eurich, Assistant to the President, University of Minnesota, Max Englehart, Herzl Junior College, Chicago, and a number of the members of the School of Education at Northwestern University.

University of Southern California. The School of Education of the University of Southern California held a summer conference on secondary education under the joint auspices of the University and the California Society of Secondary Education. The Committee in charge of the conference consisted of: Mr. William B. Brown, Acting Director, Department of Secondary Curriculum, Los Angeles City Schools; Mr. J. D. Conner, Assistant Superintendent of Schools, Pasadena, California; Dr. C. C. Trillingham, Assistant Superintendent of Schools, Los Angeles County; and Dr. Frederick J. Weersing, Professor of Education, University of Southern California.

Stanford University. Stanford University conducted a summer Conference on Curriculum and Guidance during the week of July 6 through 10, 1936. Among those who participated in the conference where John Studebaker, United States Commissioner of Education; George S. Counts, Teachers College, Columbia University, and Research Director, American Historical Association's Commission on the Social Studies; H. L. Caswell, George Peabody College, Nashville, Tennessee, and Chief State Curriculum Consultant to the states of Virginia, Alabama, Mississippi, Georgia, Florida, and Arkansas; C. L. Cushman, Director of Curriculum and Research, Denver Public Schools; Worth McClure, Superintendent of Schools, Seattle; Peter Sandiford, Psychologist, Toronto University; C. A. Howard, Vierling Kersey, and H. E. Hendrix, state superintendents of education of Oregon, California, and Arizona respectively; Frederick Redefer, Executive Secretary, Progressive Education Association; R. D. Russell, Curriculum Consultant to the State of Idaho; and Emmett Brown, Professor of Science Education, Teachers College, Columbia University and Lincoln School of Teachers College. This conference was planned to serve classroom teachers on all levels of the school system, curriculum workers, guidance workers, supervisors, administrators, research workers, and the lay public.

The University of Texas. The Third State Curriculum Conference for Texas Administrators, Supervisors, and Curriculum Workers was held at The University of Texas in Austin on June 11, 12 and 13. The chief emphasis of the Conference was put on integrating and coordinating the work of the various State Construction Committees and setting up objectives and

patterns of procedure in the five trunk-line core areas which have been selected as a basis for the organization of the new curriculum. The five core areas are: The Language Arts Core Area; The Social Relations Core Area; The Home and Vocational Arts Core Area; The Creative and Recreative Arts Core Area; and The Nature, Mathematics, and Science Core Area. The chief out-of-state curriculum leaders participating in the conference were: Dr. Otis W. Caldwell, General Secretary of the American Association for the Advancement of Science, Yonkers, New York; Dr. Raleigh Schorling, Professor of Education and Supervisor of Directed Teaching, and Supervisor of Instruction in University High School, University of Michigan, Ann Arbor; Dr. A. H. Edgerton, Director of Vocational Guidance, University of Wisconsin, Madison, Wisconsin; and Dr. J. Paul Leonard, Professor of Education, College of William and Mary, Williamsburg, Virginia. The plans initiated at the Conference were carried out during the summer at various construction centers located at different state higher educational institutions.

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## UNITED STATES OFFICE OF EDUCATION HOLDS CONFERENCE ON CURRICULUM

At the call of the United States Commissioner of Education, a group of specialists met in Washington on May 7 and 8, 1936, to consider problems related to the development of the curriculum, with special reference to the activities which in the interests of maximum service a Federal agency charged with the educational functions of the Government should carry on in this field. Members of the conference included: Florence E. Bamberger, College for Teachers, Johns Hopkins University; Thomas Briggs, Teachers College, Columbia University; Herbert B. Bruner, Teachers College, Columbia University; H. L. Caswell, George Peabody College for Teachers; Philip W. L. Cox, School of Education, New York University; Charles E. Prall, College of Education, University of Pittsburgh; Rollo G. Reynolds, Teachers College, Columbia University; Mabel E. Simpson, Director, Elementary Grades and Kindergartens, Board of Education, Rochester, New York.

Numerous problems in the field of curriculum were considered during the two days of conference. The services emphasized as among those which should be rendered on a nation-wide scale were: (1) Library service, involving the collection of courses of study, texts, research studies, reports of current practice, and other types of material dealing with curriculum reorganization (2) evaluating or interpretative service in relation to research and curriculum procedures; (3) periodic surveys of curriculum development and consultative service that would bring to State departments of education and other interested agencies expert assistance in curriculum construction;

(4) publication service, which should make available such materials as bibliographies, research abstracts and book reviews, reports of significant innovations, descriptions of programs of curriculum construction, illustrative units of subject matter and courses of study.

In general, in the opinion of the conference members, there should be a Federal laboratory in curriculum development which should collect and disseminate materials covering all the steps of curriculum construction and assisting individuals, communities, and organizations in pioneer work. The United States Office of Education should become the clearing house for such service, it was held, thus encouraging nation-wide activity in curriculum revision that will keep step with social changes. Functioning through the State departments of education, it could bring to the undeveloped areas within the State both inspiration and practical assistance.

It was recognized that such a program as this would demand a much larger budget than that which is now available to the Office of Education. The present budget of the Federal Office does not provide for a curriculum division nor for specialists who devote full time to this field. The hope was expressed, however, that future developments might make it possible for the Office to assume the responsibility of giving the much needed service.

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## PROPOSED YEARBOOK ON THE CURRICULUM

The Society for Curriculum Study has entered into a joint project with the Department of Supervisors and Directors of Instruction, involving the preparation of a Yearbook on the Curriculum. The preliminary discussion of this project was begun in February 1936 by a joint committee headed by Paul Rankin for the Department of Supervisors and Directors of Instruction, and C. L. Cushman for the Society for Curriculum Study. The selection of the personnel of the committee was made by the executive officers of the two Societies and was approved by their executive boards.

The purpose of this Yearbook as conceived by the original planning committee was to make available to the membership of the two Societies, an up-to-date summary of thought and practice in curriculum reconstruction. The committee prescribed that the Yearbook should be developed from the point of view that the curriculum consists of all experiences of pupils in the classrooms.

It further stipulated that the philosophy, trends, societal needs, and child characteristics, should represent the joint work of the committee

rather than individual contributions from different members. The original draft also proposed that the committee hold several meetings. Whether the last two recommendations can be carried out depends upon the program of financing this project, which has not yet been determined. It is very likely that a joint meeting of the two Societies to be held in February 1937 will be devoted to a discussion of the work of the committee.

The contents and personnel as drawn up by the preliminary committee and approved by the executive boards, follow:

I. The Philosophy of Curriculum: Orville G. Brim, Professor of Elementary Education, Ohio State University.
II. Recent Curriculum Trends: Henry Harap (Chairman), Professor of Education, Bureau of Educational Research, Ohio State University.
III. Social Basis of the Curriculum: Harold Hand, Associate Professor of Education, Stanford University.
IV. Child Characteristics and Needs: Laura Zirbes, Professor of Education, Ohio State University, and Charles W. Knudsen, Graduate School of Education, Harvard University.
V. Curriculum and Course of Study: Ernest O. Melby, Professor of Education, Northwestern University.
VI. Illustrative Practices: Edith Bader, Assistant Superintendent of Schools, Ann Arbor, Michigan.
VII. Illustrative Curriculums: Prudence Cutright, Assistant Superintendent of Schools, Minneapolis, Minnesota.
VIII. Organization for Curriculum Construction: Paul T. Rankin, Supervising Director, Curriculum and Research, Detroit, Michigan.
IX. Issues in Curriculum Development: Will French, Superintendent of Schools, Long Beach, California.

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## THE CURRENT SOCIAL SCENE AND THE CURRICULUM

By H. G. Lull
Kansas State Teachers College at Emporia

Assuming that education should not only parallel civilization, but that it should also improve the social order, then it follows that the primary experiences of pupils should be concerned with the socially significant relations of the current social scene. This does not mean, however, that all of the techniques and content of the traditional subjects are to be destroyed. The essential identities of the major subjects should be retained to serve socially significant objectives in common, but many of their present char-

acteristics will have to be sluffed, for they will prove to be non-functional in the social-centered curriculum. Perhaps some subjects like algebra, and geometry as such, will have to be moved into the museum of interesting but useless specimens, although the elements and processes of algebra, geometry, trigonometry, and arithmetic should be combined as the needs arise for making quantitative judgments in socially significant relations. Then we shall have a general mathematics which will be functionally, not structurally, derived.

History is one of those subjects which is essential in making valid judgments in the current social scene. That "history is the bunk", as expressed by the head of a great corporation, cannot be seriously entertained by our profession. A single illustration will suffice to show the fallacy of this position. A few days ago during the celebration of railroad week, a speaker addressing the local Rotary Club gave a glowing account of the efficiency of the railroads and their economic superiority not only in paying dividends, but in lifting the burden of taxation from the people as compared with other methods of transportation, including air, water, truck, and bus transportation. These comparisons in favor of the railroads were essentially correct in terms of the present status, but those of his audience, who knew something about the history of transportation, recalled how magnificently and expensively the railroads were endowed by the nation, the states, and the communities during the 70's, 80's and 90's in grants of land, timber, minerals, right-of-ways, and other forms of donation, and how for many years the railroads did not pay adequate taxes in proportion to the values of their holdings. What the people are now donating to air, water, truck, and bus transportation, which is just beginning to assume some importance, is insignificant in magnitude to the wealth turned over to the railroads in the latter part of the nineteenth century. The point is that whenever an appraisal of present social relations is undertaken, a knowledge of their historical bearings is almost always necessary in arriving at valid conclusions. History, therefore, either in its direct causal or analogical relations is indispensable for resolving the confusions and judging values in the current social scene. But when history is unrelated to the analysis of present social relations, it has no values for citizenship and must remain an exercise for the curiosity of antiquarians and for those in search of a relatively high type of leisure-time occupation. These values are, of course, worthwhile, and if necessary, history should be retained for them alone; but for a long time we have included history in the curriculum on the theory that it is a basic subject in educating for citizenship. We have taught history strictly in its chronological and causal sequences in the social relations of the past, and then by some pedagogical necromancy we have expected the miracle of citizenship insights in the current social scene to come to pass. This method of "passing a

miracle" has never succeeded. We shall make history work out in improved citizenship, when we become primarily interested in attacking directly the socially significant relations of the present, and then by turning to history for light and perspective in resolving the confusions or problems under consideration. We should neither destroy history nor continue to compartmentalize it, but should use its facts, interpretations, and techniques as they bear upon our social needs -- citizenship needs in the broadest sense.

We are proposing, therefore, a procedure of systematic innovation for curriculum revision. In brief outline the major steps of our proposal follow:

1. Set up the major areas of socially significant relations: Community relations, state relations, national relations, and international relations. These areas are, of course, mutually related, but each type of area may serve as a basis of social analysis. By the word area we mean an area of social relations and their interrelated meanings, not a geographical area.

2. Set up the major groupings of activities which represent the central trends of living: For the senior high school they may be tentatively stated as language, citizenship, health, vocations, and leisure-time occupations. The junior high school will include all of the above and home life. The intermediate grades will have all of the major activities of the junior high school, but with much less emphasis on vocations. The primary grades will combine health, citizenship, and home life under one heading -- social activities, and will have in common with the upper levels language and leisure-time or play activities.

3. Set up the intermediate areas of socially significant relations in each of the major areas of community relations, state relations, national relations, and international relations. These intermediate areas will be stated in terms of the major groupings of activities representing the central trends of living, such as health, citizenship, etc. For example, one intermediate area in the major area of the community under health may be "The production and care of wholesome pure foods and drinks and their uses in the best possible dietaries of individual pupils."

4. These intermediate areas are so designated, because they represent the smaller and more restricted areas of relations within the major areas of the community, state, etc., and they are, therefore, intermediate between the major areas and the experience units of the pupils. The experience units are secured by analyzing the intermediate areas. All areas must be objective in character; i.e. we must be able to measure

them in terms of objective achievements. But they should be organized in ways that tend to secure desirable social consequences that will affect character traits in line with the major activities of living -- citizenship, health, language, etc. For example, we may name such character traits as cooperativeness, which implies the will to share, the ability to initiate, persistence in well doing, the spirit of freedom and liberty, and the will to take and carry social responsibility. Other examples are traits to be understood in terms of their modern rather than traditional connotations; patriotism; an understanding and sympathy for the worth of other peoples; openmindedness and tolerance; and intellectual self-confidence. These character traits and others, generally speaking, cannot be measured, at least not accurately measured, objectively, but they can be detected in terms of attitudes, appreciations, and tendencies in habits of thought and action. They are desirable outcomes rather than objectives.

5. Allocate the existing subjects and activities in relation to the intermediate areas of socially significant relations, as they are set up for the various levels of the school according to:
   a. The primary services of the subjects and activities in achieving the intermediate areas, and
   b. The contributing services of the subjects and activities in achieving the intermediate areas.
   c. Following the processes of "a" and "b", organize subjects and activities into groups for better integration of experience.
   d. As an example of the allocation of existing subjects in the senior high school in relation to the intermediate area quoted in item "3" above, "The production and care of pure foods", etc. the subjects of primary services would be home economics, chemistry, biology, and physics; and the contributing subjects would be American History (since 1789), problems of American democracy, contemporary civilizations, and constructive English. For lack of space we cannot indicate what should be done in each subject as related to this intermediate area.

6. When steps "3", "4", and "5" are carried as far as possible, then turn to the subjects in their newly reorganized and redirected status and focus them upon each major area under the major groupings of activities, and try to develop additional intermediate areas, which will still further change the traditional status of the existing subjects without annihilating essential subject-matter characteristics.

7. After the intermediate areas are set up, these in turn are allocated with the several subjects, and the type of work to be carried on by each subject in relation to the intermediate

areas is given some degree of direction and elaboration, then from this point on the teachers and the pupils should initiate and develop their own purposes and experiences in the intermediate areas of socially significant relations. The maximum initiative, freedom, cooperation, and sharing on the part of the pupils should be stimulated by the teachers.

There are many implications connected with this approach to curriculum revision, only one of which can be mentioned in this brief outline. This approach is a middle ground between the traditional compartmentalizer, who contends that the passing of the cultural inheritance *per se* to the new generations is all that education can be expected to accomplish, and the radical child-centered progressive, who holds that the child makes his own curriculum, and that only in this primary participative experience does real education take place. The first over emphasizes the static elements of civilization, while the latter reduces reality to the rapidly moving flux of direct participative experience. The writer is perfectly willing to scrap the instruments developed in the past, when it is clear that they are no longer effective means for advancing experience in the present. The conservative refuses to use any road but the old pike, and the child-centered progressive refuses to travel on any existing road whatsoever by throwing the child *in media res* with one suggestion that he find his own goals and his own roads. The writer believes in a progressive-conservation educational program. This, he holds, is in line with the needs and principles of a democratic society.

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## ST. LOUIS COUNTY COMMISSION ON THE TEACHING OF THE SOCIAL STUDIES: A PROJECT IN CURRICULUM REVISION

By Julian C. Aldrich, Chairman,
Committee on Direction

In April, 1935, the Missouri Council for the Social Studies appointed a Committee on Curriculum. In May, 1935, a subcommittee was set up in the St. Louis area with Mr. Howard Cummings (Clayton High School) as chairman. This St. Louis committee met frequently, met with the state committee, and by October had a tentative statement of purpose in social studies instruction and a tentative list of objectives in terms of skills and attitudes. In response to a request from the city superintendents of St. Louis County the work of the committee was expanded to include all the whole program from the kindergarten through high school. The superintendents agreed to finance the enterprise and to release teachers for the work.

The project outlined took this form: A commission was to be set up which represented all grade levels and all school districts in the cooperating group, the commission to decide policies and carry out the work. The joint committee recommended the appointment of a Committee on Direction to set up and to direct the project, and suggested Mr. Julian C. Aldrich, secretary of the Missouri Council for the Social Studies, as chairman. The Committee on Direction, in addition to Mr. Aldrich, included Miss L. Katherine Clarke, primary supervisor for the cooperating schools of St. Louis County; Miss Dorothy Sisson, teacher of geography in the middle grades of the Clayton school district; Dr. E. J. Urch, teacher of history, University City Senior High School; and Mr. W. E. Goslin, Superintendent of Schools, Webster Groves.

The first major decision, then, was that the study of the curriculum should be in the hands of classroom teachers. Enthusiasms would be maintained, it was felt, if the teachers who had initiated the project would remain in charge. It was recognized that the advice of curriculum experts would be needed. On the problem of organization for curriculum revision the advice of Dr. A. C. Krey, Dr. E. B. Wesley, and Dr. H. E. Wilson, as well as the Committee on Curriculum of the M.C.S.S., was sought. A session of the National Council for the Social Studies in St. Louis (February 22, 1936) was given over to the problems of the St. Louis County project and the state project, and the following made valuable contributions: Dr. C. H. McClure (member of the Committee on Curriculum of the M.C.S.S.), Dr. W. B. Brown (Los Angeles), Supt. L. A. Butler (Grand Rapids), Mr. Virgil Stinebaugh (Indianapolis), and Dr. R. W. Tyler (Ohio State). Dr. Samuel Everett (University of Illinois) had two meetings with these groups during the Mid-West Conference on Education at Washington University on March 27, 1936.

The second major decision made by the Commission was to have every social studies teacher in each school district participate in the work of curriculum revision. The Commission has representatives from each school district. It is made up of 45 classroom teachers (23 elementary, 22 secondary), 10 principals (3 secondary, 7 elementary), 3 city superintendents, one county superintendent, 2 research directors, 2 primary supervisors, one visiting teacher, and the head of the department of education of Washington University. Discussions in the Commission are carried back to each school district. To reach every teacher, the members of the Commission set up, in their own school districts, a community association of all social studies teachers in all grades.

The first project was a study of objectives of social studies instruction. The Committee on Direction planned the project and submitted it to a selected group of the Commission who had had some experience in

curriculum construction. When the plan received the approval of this group, it was submitted to the whole Commission. It was recommended that each community association in each school district study jointly the objectives of social studies teaching. The objectives were to be stated in terms of skills, attitudes, and understandings. When each district completed its work, the list of objectives was sent to the Committee on Objectives which had been set up to tabulate the objectives in a master list.

When the Committee on Objectives had completed the tabulation of objectives in terms of skills, it submitted them to the Commission, who submitted them to the community associations for study, approval or disapproval, and the addition of other desirable objectives in terms of skills. At the same time, the Commission submitted the list of six Committees on Grade Placement, each made up of teachers skilled on a given grade level. Each committee was to: (a) determine if the objective should be sought for on that grade level, (b) state the objective in terms of child growth on that level, and (c) consider how the objective might be achieved. At the same time, the Commission submitted the list of objectives in terms of skills to the Committee on Evaluation to consider how each objective might be evaluated.

The reports of the Committee on Objectives in terms of attitudes and understandings will be similarly handled. It is the tentative suggestion of the Committee on Direction that the reports of the Committee on Grade Placement be studied to determine the bases for vertical integration; that is, to see if the recommendations of these committees will provide for cumulative pupil growth from grade to grade, and a comprehensive and well-balanced program. It will then be possible to study materials and methods which would be usable in attaining the objectives set up.

The Committee on Direction is alive to the problem of a clear statement of the ultimate aim of education. It feels that a clear statement of philosophy is essential. But it also realizes that theoretical statements might cause a waste of energy in argumentation instead of leading to a constructive solution to teaching problems. As long as the problem is kept at the forefront of consciousness, a sane "frame of reference" will control decisions. A more adequate frame of reference can be formulated by the teachers as they grow with their work. This may be more valuable than a statement by a few which might alienate many.

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# COLLEGE PARTICIPATION IN A CURRICULUM REVISION PROGRAM

by Harry A. Little,
Georgia State College for Women

About two years ago, the State of Georgia launched a program of curriculum revision. It was a long-time program, meant to cover a period of four or five years, since it was thought that enough time should be given to the program to insure the proper functioning of the new curriculum in the public schools of the state.

During the summer of 1934 about seventy-five school leaders from the state were invited to the University of Georgia where they took intensive work in curriculum revision. These leaders went back to their respective communities and, during the year 1934-35, worked with study groups among the teachers. The work of these groups was based largely on a handbook, written as part of the work done at the University during the summer.

During the summer of 1935, a special drive was made to get as many teachers as possible to attend summer schools. Over 1200 teachers from the state enrolled in curriculum courses during the summer, at the various colleges of the state. These teachers in turn went back to their schools as leaders of curriculum study groups. This means that during the years 1935 and 1936 over five thousand teachers have been engaged in the study of the curriculum. From the teachers who attended summer school in 1935 committees on general policy, aims, and scope have been organized for the state as a whole. Other committees are in process of organization.

This article has to do with the part which the Georgia State College for Women has had in helping some teachers in the utilization of a new curriculum in their own schools.

The statement is frequently heard in colleges with summer school classes, and elsewhere, that the theory of a vitalized curriculum may be very good, but that it will not work in an actual school situation. It was with this criticism in mind that at the beginning of the school year of 1935-36, the Georgia State College for Women, with the help and encouragement of the State Department of Education, agreed to supervise four projects in nearby schools, in which regular teachers were to be helped to vitalize this curriculum.

The schools chosen for this work were: Eatonton, Gray, and Louisville. The supervisors who undertook this work were: Miss Mary Brooks, elementary supervisor in our Demonstration School, who worked with Miss Sue Cowan in the second grade at Eatonton; Miss Cecilia Bason, primary supervisor in our

school, who worked with Miss Emily Champion, third grade teacher at Gray; Mrs. Martha Sibley, supervisor of cadet teachers from our school, who worked with Mrs. R. L. Ramsey and Mrs. Farmer in the first grade at Louisville; and Miss Mildred English, superintendent of the Training School, and the writer, who worked with Mrs. Hershell Smith, in the eighth grade at Louisville.

Teachers were chosen for this work who had a desire to really do something toward the improvement of their own programs. They were selected by their superintendents. No additional equipment was given these teachers not given to the other teachers in the schools. None of these teachers had had special work in this type of teaching, except that each had recently had a course in Fundamentals of Curriculum Construction in a local study group. The training of the teachers varied from two to four years and the experience from three to twenty years.

The supervisors visited the teachers one day each week. Accurate records were kept of all the projects. This supervision covered a period of approximately twenty weeks.

The principal aim of the work was to get the emphasis placed on the teaching of boys and girls rather than subjects. The teachers were encouraged to see the pupils and their learning as a whole. One means of doing this was the encouragement of the use of larger units of activity. It should be remembered that these teachers had here-to-fore done traditional textbook teaching. They were working in schools where the emphasis has been on the number of pages covered in the text.

In undertaking these projects we, the college sponsors, had in mind that we would not revolutionize any of the schools but that we would help teachers, in earnest about improving their curriculum program, develop the kind of program they desire and at the same time furnish and help other teachers in the same school system to gain ideas on the improvement of their curriculum program.

Several distinct advantages seem to have come from this work. The teachers in the schools who are trying out the work have become convinced that even with meager materials and with no special training they can enrich their program of work. Other teachers in the same system of work have followed the examples of demonstration teachers and in the same measure enriched their program. Many of the recommendations of the State Curriculum Committee have been tried out in these schools and this year it is planned to use about twenty-five schools in which such a program will be carried on.

The added benefit from this project has been the improvement in the training of the teachers in school at Milledgeville. The supervisors who

have gone out to work with teachers in the field have come back to the classrooms better able to direct teachers in training and to set before these prospective teachers the real problems they will have to meet as teachers.

We are making this type of work a regular part of our teacher-training program. The estimates of the teachers and supervisors who participated in this program indicate that it is very much worth while. Many schools have asked for this type of service next year.

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## ORGANIZING SCIENCE ON A FUNCTIONAL BASIS

By Ralph D. Russell
School of Education, University of Idaho

Present Status of Science Teaching. The present status of science teaching in our secondary schools is not very flattering to the teacher. Physics, chemistry, zoology, botany, geology, physiology, astronomy, and physical geography have steadily decreased in popularity since they were introduced into the curriculum. On the other hand, general science and biology, which were introduced later, have steadily increased. This decrease on the part of the sciences is not a reaction against science itself. The real reason for the decrease in enrollment in science courses is that pupils are denied the use of the scientific method and forced to learn a science merely for the purpose of knowing the principles. It has not been recognized that science is really two inseparable things; it is a method of knowing and it is a growing body of logically organized knowledge. Science as a logical organization of knowledge is the outcome of the scientific method just as any product is the outcome of some inseparable process. But our schools have taught the product which is the most recent status of a developing process without reference to the method which produced it or the future purposes which it will serve.

The first type of science course which I shall describe is the one now in use in most high schools. This type consists in studying books which are partly organized on a scientific basis and partly organized on a practical basis. The text starts with the rudiments somewhat simplified and proceeds with divisions according to the order of the specialist. Technical definitions and concepts are introduced at the outset. Then came laws with little indication as to their origin and less indication regarding their use. If ommissions were not made in the interest of simplification, the course would be identical with the college course from which it originated. The weaknesses of this type of course are obvious to everyone.

The laboratory procedure now in vogue suffers the same weaknesses. Clem and Shoudy collected data from about one-half of the science teachers in New York State. Over 70% of the teachers said the purpose of laboratory work was to develop the scientific attitude of mind. At the same time about 78% of the same teachers said they required all pupils to perform the same experiments. Moreover, about 50% of them thought the purpose of the laboratory procedure was to check established laws.* With all students going through the same mechanical procedure of checking established laws it is difficult to see much opportunity for the use of the scientific method. Variety of pupil purpose is denied and the mere act of checking laws is as routine and ritualistic as a heathen religion.

Science as a Way of Knowing. It has already been implied that science is not so much a logically organized body of knowledge as a way of knowing, a way of using old knowledge to discover new knowledge and new ways of acting. It follows from this, therefore, that for purposes of instruction, science should be organized with reference to its uses. If scientific knowledge is to be used to discover more knowledge of the same type, scientific knowledge should be organized with reference to itself only. This is the same as saying that scientific concepts should be organized with reference to the discovery of more scientific concepts. The vocation of discovering new scientific concepts is no different in spirit and method from other occupations in which scientific knowledge is used. To discover the best hair tonic available is also an occupation demanding the use of systematic thinking or the use of the scientific method. The occupations demanding scientific thinking are as numerous as the activities of living. They include activities having to do with social relationships as well as the selection of the best hair tonic for one's own material scalp. Science is neither socialistic nor materialistic, but unbiased. It is the only dependable method of knowing so far discovered by the human race. Its characteristics are:

(1) There is a complication arising in the relationship between an individual and his environment. (2) A problem is defined to relieve the difficulty. (3) There is a collecting and evaluation of data pertaining to the problem. This involves references, lectures, conferences, observation, experiments, reading books, etc. (4) An idea arises as to the way out of the difficulty of complication. (5) A try-out is made to see if the idea or hypothesis is workable. If it proves to be satisfactory it becomes a fact and consequently a means to the solution of further problems.

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* Knapp, Roy A. "Reorganization of High School Construction", California Journal of Secondary Education, November, 1935.

The five steps referred to are involved in every complete scientific act of thought. It is the process used in discovering new knowledge with reference to any life activity. It is the only reliable method of knowing. The scientific attitude is willingness to use this method. The objective in teaching science is not to teach a science but to instill this method and develop a willingness to use it. Dewey & Childs in The Educational Frontier said, "Science in itself is method; a method of inquiry, discovery and testing. . . In its application. . . it has had a revolutionary effect in daily life. But in itself as a method of observation and reasoning, of investigation and verification, it remains the possession of a comparatively small number of specialists. It has not become the organ of everyday ways of thinking in formation of beliefs. It is not a part of the popular mind. The ways of thought of the latter remain much as they were before the rise of science."

If the scientific method and willingness to use it, which is the scientific attitude, are to be made characteristics of thinking on the part of everybody with reference to all the problems of life it is necessary that science courses be organized around the problems on which the method is to be used. If the problem is to discover new scientific laws, the organization should be such as to show the relationship between laws already discovered. For example, HCl and $H_2SO_4$ are symbols which not only tell how to make the acids but they also tell the relationship between them. The mathematics having to do with these internal relationships of symbolized knowledge would also be an indispensable tool. And laboratory equipment and procedures should correspond. It goes without question that the kind of organization referred to would retain the present boundaries between subjects. General science and biology would have no place.

The above things are necessary if the scientific method is to be used to extend the frontiers of scientific knowledge. But very few people are engaged in this vocation. For those preparing for this occupation a case can be made for logically organized knowledge in its simplified form. It should be taught, however, psychologically with reference to the growing powers of the immature. The logical would be psychologized. A better way of stating it is that the psychological organization as means would grow into the logical organization as aim. This then is the course for the one in thousands who will become an expert in extending the frontiers of scientific knowledge. It is better than the first course described though not appropriate for the high school crowd.

General Survey of Science for the Crowd. The third type of course I shall describe is one based on the thousand and one vocations of the crowd, both male and female, enrolled in high schools. The problem here is to make scientific thinking basic to the formation of beliefs with reference

to all things. This demands a different kind of course from the two described above. In the second course described above, the various sciences are set off by themselves with thick walls between them. It would seem to imply that at one time we use physics, at another time chemistry, and still another zoology, etc. It also implies that when we study a problem we study it in piece-meal fashion, at one time from the standpoint of chemistry, at another time from the standpoint of physics, until we finally have covered the whole range of possibilities. Then by a process of addition of the various facts contributed by the various sciences, we have the solution. This very practice of segregating the sciences does not give pupils in high school an opportunity to contact them all. Very few pupils take over two years of science. If they study physics and chemistry, the other sciences cannot be studied. If they should cover all the sciences separately, not enough time would be left for other subjects which are also valuable.

Various solutions to this difficulty have been offered. One is that we offer a three year general science survey course in high school or two courses of one year each, one a survey course in the physical sciences, and the other a survey course in the biological sciences. But the idea of a survey course or a course in which scientific facts are scrambled and diluted for purposes of simplification is not sound in theory. General science as science or as a study of a science has all the defects of the first course described above with the exception that subject boundaries are broken down. What is wanted is not general science as such but the scientific method of thinking in general use. The word "general" should not apply to science but to the common problems that people in general are having to solve. Scientific facts from the various sciences would be simultaneously used on the general or common problems of mankind.

An illustration may be drawn from a problem which represents a need on the part of all farmers. It refers to the farmers' need to understand his soil. A thorough analysis of the soil with reference to its conservation involves a knowledge of such things as temperature, rain fall, erosion, bacteriology, soil chemistry, and botany. The facts from the fields of science referred to will of necessity be used simultaneously, each group making its own particular contribution. The farmer's use of his soil cannot, however, be determined by science alone. To know marketing conditions, which is a social factor, is also important. The implication here is that the right type of science course should include its social relationships. Natural science and social science cannot be separated in the study of significant problems any more than the natural sciences themselves can be separated one from another. Science furnishes means for the satisfaction of human desires. It also changes conditions making possible new and higher desires and purposes.

Organization of Science Around Functions. It is obvious from the above that the course of study in science for the rank and file of students should be organized around the unspecialized practical activities of living. English teachers have made great advances in this type of organization. They refer to these activities as functional centers. Teachers of art and of music are doing the same thing. General mathematics courses have the same ideal. In agriculture, it has been practiced a long time. Science, however, has lagged behind. Science teachers should be in the front ranks of progress because the teachers of science give at least lip service to the scientific method and the scientific attitude more than any other teachers. If they use the scientific method themselves, they would be in the lead in respect to giving the immature a chance to learn by thinking.

With the science course organized around functional centers, as referred to above, laboratory practice would be quite different from what it now is. This course would demand a laboratory where socio-scientific experiences prevail. It would be a place where generalizations are made rather than learned by checking on them with unnecessary apparatus. Real pupil problems taken from the community should form the core of laboratory work. The purpose would be the solution of those problems. Available apparatus might not suffice. Pupils would have to construct at least a part of their own apparatus. Moreover, the laboratory would extend into the community. Every problem of community life is one which demands reflective thinking and as accurate verification as possible. It is the purpose of the laboratory to make thinking and verification basic to all beliefs. Beliefs are social as as well as material. The social, therefore, cannot be omitted. The greatest need in life today is the use of the scientific method which is reflective thinking and as accurate testing as possible in the determination of beliefs with regard to human relationships. An experimental attitude toward problems of social life is a basic objective of the science teacher.

The question may arise as to the position this type of course is to occupy in the school program from an administrative point of view. It should begin in grade one and extend through grade ten. To instill the method and the attitude of making beliefs the result of verification is basic to democracy. It cannot be undertaken too early in our schools. Naturally, problems of increasing magnitude would be the core of this course as it progresses through the grades and through high school. Socio-scientific problems are not a part of the core curriculum in a school; they are the core curriculum.* Control of natural and social conditions in the interest of the desirable cravings of individuals is the central problem

* This does not exclude the aesthetic or the unspecialized practical activities of life.

of the school. The social science teacher teaches science from the point of view of the basic relations of individuals. The science teacher teaches social relationships from the standpoint of what science has to offer. Both teachers are teachers of both subjects. The two cannot be separated.

Summary. The foregoing discussion may be summarized into criteria for guidance in the construction of desirable courses in science.

1. The basic objective in any science is to use the experimental method.
2. Problems of learning are not social or scientific, but socio-scientific. The social aspects of every scientific problem should be considered.
3. Significant socio-scientific problems are the core curriculum.
4. The content of the course for the high school crowd should be the significant problems of living common to both children and adults.
5. The objective of the laboratory is experience in discovering facts and principles rather than checking them.
6. Boundaries between subjects must disappear. Different sciences are used simultaneously in the solution of problems.
7. Facts and principles should be learned by using them in purposeful situations.

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## SURVEY COURSES IN THE NATURAL SCIENCES *

By Robert J. Havighurst
General Education Board

A survey course is defined as any course intended for college freshmen and sophomores primarily as part of their general education, which draws its subject matter from two or more of the ordinary college departments. It is one which is planned as part of the general education of college freshmen and sophomores who will not necessarily become scientists, in order to distinguish between the courses which we shall discuss and the survey or coordinating course given in some colleges for upper division students who are majoring in science, and also in order to distinguish between survey courses and the general biology course now taught in many colleges. The stipulation that a survey course must draw its content from two or more of the ordinary college departments is useful in distinguishing between such courses and the elementary courses in certain special departments, as physics, chemistry, and zoology, which are also in one sense "survey courses" in that they cover a field which is divided into specialized areas for study at the intermediate and upper college levels. The "cultural" courses in separate sciences

* This is a digest, with a few alterations by Dr. Havighurst, of a more complete study which was published in the September, 1935, number of the American Physics Teacher.

are omitted as is the "orientation" type of course which devotes less than four semester hours to natural sciences.

Statistics Concerning Survey Courses. After bringing together information based upon a survey of liberal arts college catalogs, accumulated records of courses offered in teachers' colleges and a check upon book sales of a certain popular text for survey courses, it is estimated that the total number of institutions of higher education offering survey courses in the natural sciences is about 150.

Survey courses are at present increasing in numbers. Not quite ten years ago a study of the programs of approximately 300 colleges made by Fitts and Swift* showed that in 1926 there were about 5 natural science survey courses in these colleges. In 1931, on the basis of a study of college catalogs, I estimated that there were about 15 liberal arts colleges giving natural science survey courses. Thus very few survey courses are more than two or three years old, and a considerable number of them are being given for the first time this year. I know of only three or four survey courses that have been started and then dropped.

Analysis of Survey Courses. There are several varieties of survey courses, even within the limits set by the foregoing definition, representing the attempts of several hundred teachers to use subject matter of natural science as they understand it for the purposes of general education as they see it. When classified according to administrative plan there are those that bring together all the natural sciences, those that bring together the biological sciences.

The most significant analysis of survey courses grows out of a consideration of the way in which their subject matter is treated. Here we must distinguish between emphases rather than between definite types of courses. There are courses with the following characteristic emphases.

Comprehensive courses. Perhaps the majority of survey courses, as the name suggests, give an extensive survey of the topics within some broad field of knowledge. They are encyclopedic in character. The tendency in these courses is to use with slight modification the form of organization of subject matter that is found in the separate subject fields. Examples of comprehensive courses are those in physical and biological sciences at Chicago, in human biology and in physics and chemistry at Minnesota, in physical sciences at Colgate, in physical and biological sciences at Georgia, and in natural sciences at Stephens College.

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* C. T. Fitts, and F. H. Swift, The Construction of Orientation Courses for Freshmen, Univ. of Calif. Publications in Educ. 2, N. 3 (1928).

Selective courses. A selective course is one in which a small number of topics or principles form the framework, the subject matter pertaining to them being drawn from different science fields. The subject matter of a selective course may be chosen largely on the basis of what seem to be the most pressing student needs and interests, as in the biological science course at Colgate; or it may be chosen to illustrate some important theme, as in the Evolution course at Dartmouth and in the Basic Wealth course at Minnesota.

Analytical courses. An analytical survey course is one that emphasizes relationships. These relationships may be those that exist between the facts and the generalizations of pure science, those that exist between pure and applied science, and those that exist between science and philosophy, religion, morals, economics, politics and other aspects of human life. Comprehensive and selective courses may be analytical, but are not necessarily so. The Chicago general courses are analytical, as is the physics-astronomy course at Ohio State, and the new natural science course at Columbia.

Descriptive courses. The descriptive course is one that presents information without much attempt to show relationships. The comprehensive course which covers a great deal of ground in a small amount of time tends to be descriptive rather than analytical. Selective courses tend to be analytical, but some of them are descriptive. All courses are to some extent a mixture of both types, but the amount and the quality of the analysis justifies us in calling some courses analytical and others descriptive.

Pure Science courses. The pure science survey course emphasizes science for its own sake. That is, it shows how scientific knowledge is obtained by the scientist and used as a means toward getting more knowledge. It deals with the laws and theories of pure science, showing how the laws gather together into generalizations a great many particular facts, and how the theories account for known phenomena and suggest further exploration into the unknown. The Chicago courses are of this type, as is the physics-astronomy course at Ohio State. Such courses are usually analytical, for they need to trace the relationships between the facts and generalizations of pure science. They may be selective, or comprehensive.

Interpretative courses. The interpretative course emphasizes science as it affects human affairs of general interest and concern. Those who have read the 31st Yearbook of the National Society for the Study of Education* entitled, A Program for Teaching Science, will be familiar with the idea there presented of organizing the science curriculum for the purposes of

* Public School Publishing Company, Bloomington, Illinois, 1931.

general education about broad generalizations which ramify widely into human affairs. Such generalizations, for example - "the sun is the chief source of energy for the earth"- we may call - "interpretative generalizations" to distinguish them from "pure science generalizations" which are designed to extend knowledge in the fields of natural science. A course organized about interpretative generalizations is an interpretative survey course. The course given at the Colorado State Teachers College at Greeley, written up in the textbook of Jean, Harrah, Herman and Powers, which is widely used especially in teachers' colleges, is an interpretative survey course. The physical science teachers at Pasadena (California) Junior College are developing such a course. The interpretative survey course tends to be analytical, tracing the relationships between pure and applied science, and between science and other aspects of human life. It may be selective or comprehensive, but if comprehensive it aims at an extensive survey not of the area of pure science, but of the area of interpretative science.

Advantages and Disadvantages of Survey Courses. Out of the situation in the second decade of this century, which saw specialized knowledge increasing so greatly in amount that men were being forced to confine their expert knowledge to small areas of science, while at the same time several hundred thousand new students were coming to college with no aptitude or desire for a life of scholarship, grew a demand for a kind of amateur education in the broad fields of knowledge that would be sufficient for the education of many students and would supplement for the scholar his specialized knowledge in a small field. One of the ways of meeting this situation, a way which has been followed by a number of colleges, is to develop a planned curriculum for the greater part of the first two college years. This planned curriculum contains a balanced intellectual diet which is judged to be wholesome and adequate for the students in attendance at a particular college. The natural science survey course often appears as part of such a planned curriculum. It is said to be superior to the specialized science course designed primarily for students who will do further work in science because it does one or both of the following: (1) It helps the student to secure a comprehensive knowledge of natural science. (2) It helps the student to secure a coordinated and humanized understanding of natural science. These, with the added fact that exposure to a number of different fields during his early college years may help the student to make a wise vocational choice, are the advantages claimed for the natural science survey course.

Critics from the right and from the left can point out disadvantages in survey courses. There is the conservative who emphasizes the disciplinary value of scholarly work in the patterns set by professional scientists

even for students who will not become scientists, and who believes that good hard work by a student and conscientious teaching by a teacher make a valuable experience for the student no matter what the subject matter may be; he sees no reason for changing to a survey course with all of its practical difficulties. Then there is the progressive who is opposed to the planned curriculum with its prescription of a balanced intellectual diet because it does not take sufficient account of individual differences in need and aptitude among students; he believes that the survey course, since it is set up as a body of subject matter supposedly valid for the general education of all students, is a mistake. Aside from these criticisms which spring from different educational points of view, there are certain practical difficulties which the teachers of survey courses are the first to admit. There is the difficulty of finding teachers who are well-trained or well-versed in the subject matter of more than one subject-area. In case the course is given by several specialists there is the difficulty of securing the kind of cooperation that will produce an integrated learning experience for the student. Textbooks are just beginning to appear for survey courses. An extremely important difficulty is that of getting concrete learning experiences into the course.

What the colleges now offering survey courses would do if the senior high schools generally should develop survey courses in general science is uncertain. Some college physical science courses are so far above secondary school level that they could continue to be given without danger of being duplicated. Others would have to be abandoned or changed. Some teachers of survey courses would drop those courses and look for some other way of making physical science contribute to the general education of college students.

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# REVIEWS

Draper, E. M. - Principles and Techniques of Curriculum Making. D. Appleton - Century Company, 1936.

To aid the prospective reader of this book, a few statistics may be of value. Of the 861 pages, exclusive of the index and front material, approximately 471 pages are quoted directly from books, magazines, courses of study, letters to the author; 63 pages are abstracts of courses of study or magazine articles; and 74 pages are bibliographies. These add to 618 pages leaving 243 pages of original material approximately one-fourth of which is used to introduce the quoted and abstracted selections. The quoted, ab-

stracted and bibliographical materials range from 1921 to 1933 with the center not later than 1930 so that the important advances which have been made in curriculum principles and techniques during the past five years are not treated.

The book is divided into four major parts. Part I of 62 pages deals with definitions and current problems in curriculum construction. Part II of 145 pages treats principles and objectives with the emphasis on determining objectives from primary and secondary sources and organizing them for course of study construction. Part III of 470 pages is titled "The Unit of Work" and discusses course of study units; centers of interest units; individualized learning units; child-centered units; learning activities, procedures, instructional aids for academic and non-academic units; and testing achievement in the various types of units discussed. Part IV of 124 pages is called "Administration and Organization of Curriculum Development" and contains two chapters, one on "Organizing and Writing the Course of Study" and the other on "Administration of Course of Study Construction."

The viewpoint of the author in the selection and organization of the quoted and abstracted materials is well stated in his preface. He holds that the problems of curriculum construction "invite the teacher and administrator to consider (1) the principles of education, (2) the general objectives of various curricula in the school, and (3) the specific objectives of definite subject-matter fields." Also, they must be well grounded in "methods of instruction" since "the true importance of method of instruction in the reorganization of teaching materials has by no means diminished." Furthermore, every teacher "should know the techniques of constructing a course of study in his particular field." Finally, the teacher and administrator can be best aided in studying the problems of curriculum construction by a book which "attempts to present a practical approach to the problem rather than a theoretical treatise" by using "current experimental literature and courses of study freely."

The author has fulfilled his promise. He has described techniques in use for the selection of objectives with little attempt at their critical evaluation. He has outlined in detail various types of methods of instruction and educational procedures in current use but has discussed no fundamental interpretation of learning as a basis for their thoroughgoing appraisal. He has shown by quoted example the techniques of course of study construction used in selected cities in various subjects but has given little consideration to their intelligent reconstruction. He has interpreted "practical approach" to mean emphasis on the way in which curriculum making has been carried on up to 1930 and "theoretical treatise" to imply emphasis upon meanings, insights, critical interpretations which would enable the teacher to study his problems more intelligently, since

these have been purposely or unintentionally omitted. At one point in the early part of the book (p. 73) it appeared as if there might be some forward rather than backward look, for the author states that "if the general welfare is to be advanced, education must be for life as it might and should be lived as well as for life as it is being lived", but the curriculum interpretations which follow are all of the is-being or has-been-lived type. This book will be of value to those who accept this limited viewpoint of the curriculum and the philosophy and psychology which underlie it.

L. Thomas Hopkins,
Teachers College, Columbia University.

Norton, John K. and Norton, Margeret Alltucker - Foundations of Curriculum Building. Ginn and Company, 1936. 600 pages.

In Foundations of Curriculum Building, the Nortons have given curriculum workers a handbook which brings together the most pertinent material on curriculum building at the elementary school level. The first four chapters of the book set the stage for curriculum work by discussing, The Why of Curriculum Construction, Underlying Issues in Curriculum Construction, Various Approaches to the Selection of Curriculum Content, and Contributions of Research to Curriculum Building. This four-chapter background is brief but well annotated and each chapter has a good bibliography which would permit curriculum workers to carry on a more extended study.

In this educational philosophy, the authors present different points of view on such controversial questions as the permanent value of traditional curriculum content, the role of the school in effecting social change, and child interest as contrasted with adult interest. In presenting such controversial matters, the authors have not only succeeded in being tolerant and progressive, but they have avoided the haziness and ambiguity which frequently characterizes such discussions.

Following the background of educational philosophy there is presented a chapter by chapter treatment of the conventional subject fields as health and physical education, social studies, reading, handwriting, spelling, language, grammar and composition, arithmetic, etc. In each of these chapters there is a synthesis of the most pertinent research on the questions which will be the concern of every curriculum committee working in that particular field. While the time is probably ripe for the appearance of a book which will present problems of building a curriculum of the integrated or activity type, there is but little doubt that this conventionally organized book will at the present serve a far greater field of workers than would the other type. One wishes that the space devoted to home economics and industrial arts might have been given over to a discussion of integration

or that the space might have been used by the authors to give a fuller discussion of other topics. There are but few elementary schools that give a place to home economics and industrial arts as separate subjects.

In the last chapter, Trends in Curriculum Building, the authors have discussed such problems as: changing conceptions of the curriculum and course of study, the changing role of educational objectives and principles, new and varied approaches in determining the curriculum, changing basis for course of study organization, increasing differentiation of curriculum content and activity, democratization of curriculum revision, and curriculum revision a permanent and continuing function. The discussion of each topic is brief but pithy and full of real substance. The definitions of "curriculum" and of "course of study" which is given in this section should do much to clarify the confused and inter-changeable use of these two terms.

Careful examination of the book leaves one with a conviction that this volume will find its way into every professional library and eventually into the hands of every teacher, principal, and supervisor engaged in a study of the curriculum. The authors have put into this volume not only the results of their excellent scholarship, but also an intimate knowledge of crucial questions in curriculum building.

Prudence Cutright.

Bain, W. E. - Parents Look at Modern Education.
Appleton - Century. 1935. 330 pages.

To parents of the past, the processes of school keeping were a mystery into which they were not supposed to inquire, but to which they hopefully entrusted their children. Today we no longer think of education as a process confined to the four walls of a school room. We recognize that both the home and the school, indeed all those forces which constitute the child's world, are, in the deeper sense, "educational institutions," and that the habits and attitudes acquired by children at home impinge at all points on his life at school. It follows, therefore, that in order to get the best integrated results for personality and character development, as well as for the acquisition of knowledge and skills, it is inevitably necessary that parents increase their understanding of the nature of the educative process. They must become familiar with the changing objectives and methods of the modern school.

Winifred Bain, formerly Professor of Education at Teachers College, Columbia University, and now associated with New College, has had a wide experience in elementary public schools and in teacher training schools.

It is obvious that Dr. Bain is familiar with the educational procedure of the traditional schools, as well as with the modern schools. In a simple straightforward style she describes the changes which have occurred in the nursery schools, kindergartens, and elementary schools, and the processes which have led to these changes. She discusses, too the new problems that have necessarily arisen and that still remain to be solved.

The earlier chapters are concerned with the nursery school and kindergarten. Dr. Bain considers the needs of very young children and the ways in which the needs may be met by these institutions. She describes, too, the ways in which the nursery school and kindergarten may be of service to the parents of two-to-five-year-olds. The subsequent chapters deal with various phases of the elementary school. Considerable attention is given to the question of curriculum. Dr. Bain points out the revolutionary changes that have taken place in our attitudes toward "school subjects." No longer do we insist upon a sharp dividing line between the academic and practical. "The first job of the modern curriculum maker is to analyze the needs of life as it is or as it may be in an improved social order, not alone the so-called practical needs, but attitudes and appreciation as well." In such a setting, the good old-fashioned school subjects, far from being neglected, are made more vital and significant to children by being tied up with their daily activities and interests. This is particularly true of the social and natural sciences. The tool subjects, reading, writing and arithmetic, are also given their rightful place in the curriculum. Contrary to popular opinion, the modern school recognizes the necessity of drill in the mastering of these subjects, but it attempts to discover the point in the child's mental development when this drill will be most effective and to stress it at that time. Tests, grades, and discipline are discussed and Dr. Bain does much to clarify the modern school's attitudes toward these controversial issues.

In the last chapter, The Future of Your Child in the American Schools, the author puts forth her deepest conviction - namely, that there can be no truly progressive school without understanding cooperation between school and home. The book, therefore, performs a twofold service. Not only does it clear up many misconceptions, much vagueness, and not a little antagonism on the part of parents toward modern schools; it also calls to the attention of teachers the necessity for a closer relationship with parents and for an increased understanding of the problems and purposes of the home.

Sidonie Matsner Gruenberg,
Child Study Association of America.

Teachers' Guide to Child Development in the Intermediate Grades.
California State Department of Education, Sacramento, 1936.

Unlike most published curriculums this volume makes no attempt to present a detailed program of units and activities. If one were trying to characterize it in one phrase, perhaps he could do no better than to say that its primary purpose seems to be to point the way. It is really prepared to serve as a guide for the creative and intelligent teacher. The authors have developed the theory of modern education and have shown how this theory may be applied to different areas of experiencing - social studies, science, music, art, etc. We are warned in the foreword that the materials of this volume are not imposed upon local schools or required of individual teachers. Rather the work is intended to set the pace and to indicate routes.

Some other valuable features of the Teachers' Guide are: (a) it contains many excellent and refreshing examples of creative work in written expression, dramatics, art, music, and so forth, developed in the intermediate grades; (b) it has a special chapter describing the day-to-day development of a unit in a class of average children; (c) it develops the means of guiding children in creative work; and (d) it gives the points of view of the special subject matter areas.

The work will repay careful study. The ultra progressive will perhaps grow cold when he reaches the discussion of separate subjects despite the fact that the illustrated units go far toward removing this objection. The critical reader will no doubt grow restless with the liberties taken with certain terms. Compare, for example, the use of the word ability on page 4 with the use on page 110 and again on page 246. The meaning of growth on page 1 would be futile to one whose critical powers had not been blunted by the continuous lack of rigor among us who follow a pedagogical career.

B. O. Smith,
College of Education, University of Florida.

Alberty, H. G. and others - Preliminary Report of the Science Committee to Commission on Secondary School Curriculum of the Progressive Education Association. P.E.A. Commission on Secondary School Curriculum, Fieldston School, New York City. $1.00. About 100 pages. Mimeographed.

The purpose of this report is to outline in its broader features a program of education in the natural sciences which can be articulated with a total educational program at the level of secondary education and is directed toward the attainment of the aims of general education. The report

consists of the following four parts: (1) Objectives of Education in Relation to Science Teaching; (2) Content from the Field of the Natural Sciences; (3) Educational Values of Special Importance in Science Education; and (4) Evaluation of Student Achievement and of Curricular Activities in the Science Area.

This and similar reports from other subject area committees working under the auspices of the P.E.A. Commission on Secondary School Curriculum are prepared with the collaboration of those who are conducting the Commission's Study of Adolescents. The Commission is seeking to bring to bear upon the problems of curriculum construction the services of people who are making an intensive study of the needs, interests, and capacities of adolescents, of people who are teaching adolescents in the classroom, and of people who are specializing in the gathering and organizing of knowledge. The science report gives in preliminary form the first of the published results of this collaboration of the specialist in the study of adolescents, the classroom teacher, and the specialist in science.

Robert J. Havighurst,
General Education Board.

Wrightstone, J. Wayne. Appraisal of Newer Practices in Selected Public Schools. Bureau of Publications, Teachers College, Columbia University, New York, 1935. 117 pages.

The purposes of this study, conducted under auspices of the Institute of School Experimentation of Teachers College, were to: "(1) obtain descriptions of experimental practices in selected classrooms; (2) construct new instruments for the measurements of factors of attitudes, adjustment and social performance; (3) analyze and appraise certain outcomes of newer practices by the administration of the usual subject-matter tests and the application of newly devised instruments in a limited number of classrooms; and (4) state the implications of the results for further experimentation and measurement."

Measurable factors were classified into (1) intellectual factors, including knowledges and skills, (2) dynamic factors, such as desires, motives, attitudes, and (3) performance factors such as participation in class discussion, and voluntary pupil activities.

Schools in four communities were divided for comparison into two types, (1) newer-type, and (2) standard type schools. Comparison of the two types of schools led to the conclusion that in intellectual, dynamic, and social performance factors, superior results were achieved by the newer-type schools.

J. Earl Davies,
Adams State Teachers College.

# NEW PUBLICATIONS

## NEW BOOKS AND PUBLICATIONS

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